

REMARKS

This Amendment is responsive to the Office Action of November 28, 2005. Reconsideration and allowance of **Claims 1-4, 7-14, and 17-22** are requested.

The Office Action

Claims 1-4, 7-14, and 17-22 stand rejected under 35 U.S.C. §102(b) as being anticipated by Marshall (U.S. Patent No. 6,445,139).

Claim 22 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Marshall (U.S. Patent No. 6,445,139) in view of Pierpoint (U.S. Patent No. 4,273,999).

Claims 5-6 and 15-16 are canceled.

Claims Distinguish over Cited Prior Art

Claim 1 calls for among other elements: at least one sensor set to detect an external light load directed to the light emitting surface.

Applicants respectfully traverse the Examiner's interpretation of Marshall. Marshall is directed to automatically controlling the chromaticity of the light source, which includes LEDs having a plurality of colors, without regard to the factors which cause the light outputs of the individual colors to vary. A photodiode senses the light intensity of the LEDs and provides a feedback to a controller. The controller generates current signals which control light intensity for respective colors, red, blue and green, to obtain desired light balance. (Fig. 3).

Therefore, sensor in Marshall senses the LEDs intensity. Sensor in Marshall does not sense an external light load shining at the LEDs. Claim 1 sets forth two lighting systems: (1) a first lighting system and (2) a second lighting system. The sensor senses an external light load (system #2), which is the light system foreign to the lighting apparatus (system #1). The examples of the external light load are an ambient light, sunlight, headlights light, etc. Such external light load can be present or absent. If the external light load is present, the increased current to the LEDs of the lighting apparatus is supplied. Marshall does not disclose or suggest a control system which triggers the increased current in response to indication of a presence of an external light load as set forth in claim 1. Marshall's control system generates a modulated current in response to the measured

intensity of the LEDs themselves. Furthermore, Marshall does not disclose or suggest that the increased current is being maintained for a period of time while the external light load is sensed.

In summary, Marshall does not disclose either explicitly or inherently the lighting system in which (1) the sensor detects the external light load; (2) the increased current is generated when the external light load is sensed; and (3) the increased current is supplied to the LEDs for as long as the external light load is sensed and present as set forth in claim 1.

It is therefore respectfully submitted that **claim 1 and dependent claims 2-3 and 7-10** distinguish patentably and unobviously over Marshall.

Regarding **claim 4**, in addition to its relationship to claim 1, claim 4 calls for among other elements: sensor is positioned in a location remote from the printed circuit board. Such remote positioning of the sensor has an advantage of better aligning the sensor towards oncoming external illumination. It is asserted in the Office Action that Marshall describes such limitation. The Applicants respectfully traverse. The Applicants are directed to Fig. 2, in which a schematic of electrical interconnections of the sensor and the electrical system is shown. Fig. 2 does not show a physical positioning of the sensor. Applicants direct the Examiner's attention to Fig. 1 in which the sensor clearly shown to be positioned on the same surface as the LEDs. Nowhere does Marshall disclose or suggest positioning the sensor remotely from the surface on which the LEDs are positioned. It is therefore respectfully submitted that **claim 4** distinguishes patentably and unobviously over Marshall.

Regarding **claim 7**, in addition to its relationship to claim 1, claim 7 calls for among other elements: the current is continuous. It is asserted in the Office Action that Marshall describes such limitation. The Applicants respectfully traverse. The Applicants are directed to col. 4, lines 43-45. Applicants respectfully direct the Examiner's attention to the text above the lines 43-45 which explains the generation of the pulsing current. The description of the current in col. 4, lines 43-45 is a continuation of the preceding explanation and, therefore, does not describe a continuous current. Nowhere does Marshall disclose or suggest supplying an elevated continuous current to the LEDs. It is therefore respectfully

submitted that **claim 7** distinguishes patentably and unobviously over Marshall.

Claim 11 calls for among other limitations: setting at least one sensor to detect an external light load directed to the light emitting surface.

Applicants respectfully traverse the Examiner's interpretation of Marshall. As discussed above, Marshall is directed to automatically controlling the chromaticity of the light source which includes LEDs having a plurality of colors. A photodiode senses the light intensity of the LEDs and provides a feedback to a controller. The controller generates current signals which control light intensity for respective LEDs' colors to obtain desired light balance. (Fig. 3).

Therefore, sensor in Marshall senses the LEDs. Sensor in Marshall does not sense an external light load directed toward the light source. Marshall does not disclose or suggest a control system which triggers the increased current in response to indication of a presence of an external light load directed to the light emitting surface of the light source as set forth in claim 11. Marshall's control system generates a modulated current in response to measured intensity of the LEDs. Furthermore, Marshall does not disclose or suggest that the increased current is being maintained for a period of time while the external light load is sensed.

In summary, Marshall does not disclose either explicitly or inherently the lighting system in which (1) the sensor detects the external light load; (2) the increased current is generated when the external light load is sensed; and (3) the increased current is supplied to the LEDs for as long as the external light load is sensed and present as set forth in claim 11.

It is therefore respectfully submitted that **claim 11 and dependent claims 12-14 and 17-22** distinguish patentably and unobviously over Marshall.

Regarding **claim 14**, in addition to its relationship to claim 11, claim 14 calls for among other elements: mounting the sensor in a location remote from the printed circuit board. It is asserted in the Office Action that Marshall describes such limitation. As described above, Fig. 2 shows electrical interconnections and not physical location of the sensor. Nowhere does Marshall disclose or suggest positioning the sensor remotely from

the surface on which the LEDs are positioned. It is therefore respectfully submitted that **claim 14** distinguishes patentably and unobviously over Marshall.

Regarding **claim 21**, in addition to its relationship to claim 11, claim 21 calls for among other elements: continually adjusting a value of the elevated current based on the detected light load magnitude. As discussed above, Marshall senses the intensity of the LEDs of the light source light source. Marshall does not sense the intensity of the external light source which is directed to the light source. Therefore, Marshall does not adjust a current of the light source based on the detected magnitude of the external light load. It is therefore respectfully submitted that **claim 21** distinguishes patentably and unobviously over Marshall.

Regarding **claim 22**, in addition to its relationship to claims 11 and 14, claim 22 calls for among other elements: positioning the signaling device on a sharp bend; and orienting the remotely positioned sensor along the bend towards a direction of the external light load.

As discussed above, Marshall positions the sensor on the same surface as the LEDs. Marshall does not position the sensor remotely from the LEDs. It is asserted in the Office Action that Pierpoint discloses positioning the signaling device on a sharp bend; and orienting the remotely positioned sensor along the bend towards a direction of the external light load. Applicants respectfully traverse such interpretation of Pierpoint. Initially, Applicants submit Pierpoint is not concerned with the signaling devices. Pierpoint is directed to detecting the ambient light with sensors and regulating the light output of the light source to provide an adequate lighting while maintaining energy conservation. The three sensors are positioned on three different surfaces to detect the sun's rays at different angles. Nowhere does Pierpoint teach the signaling device. Nor is Pierpoint concerned with a signaling device being positioned on a sharp bend. Sun illumination is known to not be coming at the sharp bend. As Earth is going along its trajectory, the sun illuminates the premises at different angles. Because of that, Pierpoint needs three sensors to detect sun illumination at different angles. Therefore, Pierpoint does not disclose orienting the sensor along one direction, e.g. the sharp bend from illumination is expected to come. Neither Marshall, nor Pierpoint, taken singularly or in combination, discloses or suggests (1) a

signaling device; (2) positioned on a sharp curve; and (3) a sensor oriented along the curve. It is therefore respectfully submitted that **claim 22** distinguishes patentably and unobviously over Marshall and Pierpoint.

CONCLUSION

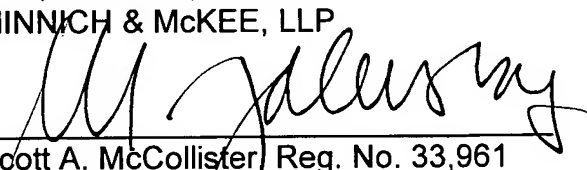
For the reasons detailed above, it is respectfully submitted all claims remaining in the application (**Claims 1-4, 7-14, and 17-22**) are now in condition for allowance.

Respectfully submitted,

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